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ABSTRACT

This pilot study sought to investigate the verbal cooperative behavior of middle class and lower class children when paired with same and opposite SES partners. The subjects were 12 boys and 12 girls ranging in age from 4-1 to 5-4. In the experimental situation, 2 children were seated facing each other across a table. Each of them had five pictures in front of them that they had previously been trained to identify and match by name. A board in the middle of the table prevented one subject from seeing the other's pictures. The subjects were told to point to the pictures, one at a time. If they both pointed to the same picture, they both received token reinforcement that could later be redeemed for toys. To assure a match, one subject would have to tell the other which picture he was pointing to (initiation) and the other subject would have to point to the same one (matching). Contrary to expectation, on both older and younger age levels, lower class children initiated responses more often than middle class children. (MH)

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CROSS-CULTURAL VERBAL COOPERATION*

Nancy Mann Reese

INTRODUCTION

The purpose of this study was to investigate verbal cooperative behavior of the lower class child and the middle class child when paired with same SES member and opposite SES member. Previous studies of cross-cultural cooperation have not required verbal interaction between the participants (Madsen, 1967; Rosenfeld and Russell, 1967). The present study was an attempt to ascertain differences (quantity, initial remarks, maturity), if any, in the verbal behavior required to complete a cooperative task among a group of lower class children paired with lower class children, a group of lower class children paired with middle class children and a group of middle class children paired with middle class children.

It has been suggested (Rosenfeld & Russell, 1967) that lower class children are more cooperative and/or comfortable when paired with a same SES peer than when paired with an opposite SES peer. The writer feels that this finding has implications for future Head Start nursery school programs. It is possible that greater social gains would be made by Head Start children if the nursery school group in which they were enrolled was integrated (lower class and middle class), as are the public schools in which they will eventually be enrolled.

METHOD

Subjects

Before the proposal for this study was submitted to Head Start Research, the investigator had secured verbal agreement for cooperation from the directors of three nursery schools. After the design was presented the teachers and the directors, it was agreed that eight four year olds from each of four different groups would be the Ss for this study. Four boys and four girls were to be chosen from each of four different groups: The Community Head Start Center, the Ballard Head Start Center and two First Methodist Church Nursery School groups.

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However, on the day scheduled for the investigator to choose the Ss, the director of one of the Head Start groups informed her that they had decided not to participate. The resulting reduction in sample size and limitations in matching made this study less definitive and more in the nature of a pilot study. As such it serves definitively only for the assessment of the suitability of the task for this age level and for refinement of the experimental techniques.

Last minute changes were made in the subject population. A prerequisite for the study was that the two children paired for any one session not know one another. Fortunately, there were two groups at both the Ballard Head Start Center and the First Methodist Church Nursery School. The director and teachers at Ballard Center agreed to a request for more children from each group, and the investigator chose all qualified four year olds available.

The final subject population consisted of twelve Head Start children from the Ballard Head Start Center and twelve children from the First Methodist Church Nursery School. Three boys and three girls were chosen from each of four different groups: Group I - Methodist Church (ages 4-7 to 4-10), Group II - Methodist Church (ages 4-11 to 5-3), Group I - Ballard Center (ages 4-1 to 4-4), Group II - Ballard Center (ages 4-10 to 5-4). Attempts were made to match each child with an opposite socio-economic level child and with a same socio-economic level child. This was achieved with more accuracy when matching between different socio-economic levels; however, the age differences in the two groups at each Center prevented close matches between same socio-economic levels.

Parent permission was obtained from all parents of the children participating in this study.

Apparatus and Materials

The stimuli were four duplicate sets of five pictures of easily identified objects such as those passed by three year olds on the Stanford Binet picture vocabulary subtest. The pictures, each drawn on a 4" by 4" card, were an airplane, a telephone, a ball, a tree and a hat. The apparatus permitted the display of two sets of pictures each visible to only one S. Poker chips served as immediate reinforcers and were dropped by E into a glass bowl for each S. The poker chips were traded for an inexpensive toy at the end of each session.

Procedure

The schedule for the experimental sessions is indicated in Table 1.

Insert Table 1 about here

Because of absences, field trips and time limitations (the Methodist Nursery School group terminated on May 24), this schedule was disrupted. In some cases, it was impossible to complete three sessions; other sessions deviated from the proposed order of presentation. It might be possible to control for schedule disruption if the study were begun earlier in the school year than the last month and if a larger subject population were available.

Each child was to participate in three different experimental sessions:

Session I - Training Session. The E asked S to name all five pictures. She then pointed to one of the five pictures and asked S to point to the same picture in an identical set in front of S. If S pointed to the same picture, he was told, "That's right, you pointed to the same picture". The E proceeded through the remaining four pictures. Only the children who demonstrated understanding of the "sameness" concept--naming and matching all five pictures in no more than two trials--were to be chosen for participation in the study. All named and matched the five pictures on the first trial.

Sessions II and III - Testing Sessions. Each child was to be tested once with a same SES peer and once with an opposite SES peer. The sequence of tests was to be counterbalanced across S's (See Table 1). The children selected for a pair were always unacquainted with one another. Location of testing was to be varied so that each child would leave his nursery school and ride in a taxi with a research assistant to the location of his matched peer for one session.

Two children were brought to a room and seated facing each other at a table. Five pictures (the same used in training) were arranged horizontally on a board facing one S, and the same five pictures were placed in the same manner before the other S. The board was high enough to prevent each S from seeing the other's responses but did allow seeing one another's faces. The E could see both children's responses. The original instructions to a pair of children were: "Now we are going to play a game. Put your finger on one of the pictures. If you put your finger on the same picture as your partner here on the other side of the table, I'll give you one of these chips. You can turn in your chips for one of these (indicate displayed toys)."

If necessary, E reminded Ss that they could not look at one another's pictures but that they could tell each other which picture to point to.

During the first testing session, it was necessary to ask the Ss to name each picture in order to elicit verbalization. This instruction was repeated during each testing session thereafter (after the initial instructions were given). When one S named the picture he was pointing to, and the other S performed accordingly, E dropped a poker chip in each S's bowl and said, "Good". All verbalization was tape recorded. The E spoke the name of the child who prompted matching as she dropped the poker chip

into his bowl and the name of the other child second.

The time for each session varied (See Table 2).

Insert Table 2 about here

Each pair of children matched at least ten pictures; however, E did not control for number of matches beyond the first ten.

Results

Absences and time limitations prevented the completion of some sessions. All three experimental sessions were completed for eight children. An additional ten children had the training session and one testing session. Results will be reported separately for part of this study for the children who completed all three experimental sessions and those who completed only two.

Tables 3 and 4 indicate which children, lower class or middle class, initiated responses and which of these initiations were matched or unmatched by the partner.

Insert Tables 3 and 4 about here

As can be seen in Table 3, in the pairs with age varied and SES constant, the older children in the lower class initiated more matches but in the middle class were approximataly equivalent to the younger children. In the pairs with SES varied and age constant, the lower class children initiated more matches, especially at the older age level, at which all matches were initiated by the lower class children. Few initiations made in any treatment combination were unmatched. Out of 80 initiations 72 were matched.

As shown in Table 4, describing the performance of the children who had only one testing session, the first result was not corroborated, since the younger children initiated more matches, in both SES groups. The second result, however, was fully corroborated, although the effect was less striking; lower class children initiated more matches than middle class children at both age levels. There were a total of sixteen unmatched initiations made as compared to the total of eight in Table 3. Out of 70 initiations, 54 were matched. The highest frequency of failures to match was found when lower class younger Ss were paired with lower class older Ss.

Since there will be no statistical analysis, the results in the remaining tables are reported for the combined Ss (those who completed both testing sessions and those who participated in only one test session).

Table 5 indicates which child made the first response (matched or unmatched) and which child prompted the first match in any given pairing.

Insert Table 5 about here

In the pairs with age varied and SES constant, the younger Ss in the lower class made the first response as often as the older Ss, but in the middle class the older Ss made the first response more often than the younger Ss. In the pairs with SES varied and age constant, the lower class Ss made more first responses than the middle class Ss, especially at the older age level, at which all first responses were made by the lower class Ss.

In the pairs with age varied and SES constant, the younger Ss in the lower class initiated more matches than the older Ss, but there was no age difference in the middle class. In the pairs with SES varied and age constant, all matches were initiated by the lower class Ss at both age levels.

Table 6 indicates the time after instructions were completed until the first match was made in any given pair and the average time until first match for each treatment combination.

Insert Table 6 about here

In Table 7 the time for the first ten trials in each pair is shown. As can be seen, the average time per ten trials ranged from 3' 40" for the pairing of lower class older and middle class older Ss to 5' 27" for the pairing of middle class older and younger Ss.

Insert Table 7 about here

Table 8 indicates the number of times each picture was chosen; the pictures are ranked in order of choice. Differences in picture preference appear to be fairly small, as indicated by the range of 52 to 62 choices.

Insert Table 8 about here

There are no clear-cut age or SES effects in the data presented in Tables 6, 7 and 8.

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Discussion

It was the writer's hypothesis that middle class children when paired with an unfamiliar peer and asked to perform a verbal task would take more initiative than the lower class child. However, these results, although limited due to small sample size, suggest the opposite. If cooperation were to be defined as the willingness to support the unknown peer's choice, then the middle class children indicated more cooperative behavior. However, the immediate poker chip reinforcer may have affected their readiness to comply with initiation made by their partner. It would be interesting to substitute only social reinforcement for a matched response and see if matching was as immediate and consistent.

The writer did not intend that there be an older-younger comparison so that more meaningful comparisons could be made among treatment groups. However, an interesting anecdotal finding emerged from the younger and older pairings. It appeared that the older child would frequently wait, almost patronizingly, for the younger child to take initiative in naming the first picture.

Several unanswered questions were clarified and refinement of task was achieved with the completion of this study. Instructions were refined and standardized, and simultaneously it became apparent that the task was age appropriate. The time for the task did not exceed the S's attention span. The investigator did not control for number of matches and would in repeating the study designate the number of matches to be achieved so that variations in experience with the matching task would be controlled for when the child entered the third testing session.

A larger number of Ss would be needed to allow for drops when the presentation sequence could not be followed, for matching age of Ss between same SES groups, and for a statistical analysis of the results. Pictures were easily named by all children and seemed to be equally popular in choice.

Further investigation of cross-cultural cooperative behavior as well as other socially adaptive behavior would be useful in shedding further light on advisability of integrated (lower class and middle class) nursery school programs.

REFERENCES

Madsen, M., Sub-cultural determinants of cooperative and competitive behavior, Annual Report, Project II - Head Start Evaluation and Research, University of California, 1967.

Rosenfeld, H. M., and Russell, R. L., Influence techniques in dyads composed of interpendent middle and lower class preschool children, Annual Report, Project 35 - Head Start Evaluation and Research, University of Kansas, 1967.

Table 1

Schedule for Experimental Sessions

Monday, April 29

9:15 - 10:45 - Methodist Church - M_1, M_2, F_1, F_2
10:45 - 11:15 - Ballard Center - m_1, m_2, f_1, f_2

Wednesday, May 1

9:15 - 9:45 - Methodist Church - M_1 and M_2
9:55 - 10:25 - Ballard Center - F_1 and f_1
10:35 - 11:05 - Methodist Church - F_2 and f_2
11:15 - 11:45 - Ballard Center - m_1 and m_2

Friday, May 3

9:15 - 9:45 - Methodist Church - F_1 and F_2
9:45 - 10:15 - Methodist Church - M_1 and m_1
10:25 - 10:55 - Ballard Center - M_2 and m_2
11:00 - 11:30 - Ballard Center - f_1 and f_2

Monday, May 6

Same as April 29 for M_3, M_4, F_3, F_4 and m_3, m_4, f_3, f_4

Wednesday, May 8

9:15 - 9:45 - Methodist Church - F_3 and F_4
9:55 - 10:25 - Ballard Center - M_3 and m_3
10:35 - 11:05 - Methodist Church - M_4 and m_4
11:15 - 11:45 - Ballard Center - f_3 and f_4

Friday, May 10

9:15 - 9:45 - Methodist Church - M_3 and M_4
9:45 - 10:15 - Methodist Church - F_3 and f_3
10:25 - 10:55 - Ballard Center - F_4 and f_4
11:00 - 11:30 - Ballard Center - m_3 and m_4

Key:

M = middle class male
F = middle class female
m = lower class male
f = lower class female

The schedule for M_5, M_6, F_5, F_6, m_5, m_6, f_5, f_6 was the same as week of April 29 - May 3.

Table 2

Time of Task*

Pairing

	LCY + LCO	MCY + MCO	LCY + MCY	LCO + MCO
	3' 53"	7'	10' 20"	5' 35"
	7'	5' 50"	7' 40"	6' 30"
	8' 30"	9' 30"	8'	
	6' 30"			
Mean	6' 28"	7' 27"	8' 20"	6' 33"

* Each number in rows 1-4 represents a different pair

Key:

LCY = Lower class younger

LCO = Lower class older

MCY = Middle class younger

MCO = Middle class older

Table 3

Matched and Unmatched Trials for Those Ss Who Completed in Two Testing Sessions - Total of Ten per Session

	Matched				Unmatched			
	Initiated by:				Initiated by:			
Pairs	LCY	LCO	MCY	MCO	LCY	LCO	MCY	MCO
LCY + LCO	6	13			1			
MCY + MCO			10	9				1
LCY + MCY	10		5		2		3	
LCO + MCO		19				1		

Key:

LCY = Lower class younger

LCO = Lower class older

MCY = Middle class younger

MCO = Middle class older

Table 4

Matched and Unmatched Trials for Those Ss Who Completed Only One Testing Session---Total of Ten per Session

	Matched				Unmatched			
	Initiated by:				Initiated by:			
Pairs	LCY	LCO	MCY	MCO	LCY	LCO	MCY	MCO
LCY + LCO	10	3			4	3		
MCY + MCO			10	8				2
LCY + MCY	5		2		2		1	
LCO + MCO		10		6		4		

Key:

LCY = Lower class younger

LCO = Lower class older

MCY = Middle class younger

MCO = Middle class older

Table 5

Initiator of First Response and

First Match in Each Pairing

Measure	Pairing							
	LCY + LCO		MCY + MCO		LCY + MCY		LCO + MCO	
	Y	O	Y	O	LC	MC	LC	MC
First Response								
Matched	1	1	1	2	1		2	
Unmatched	1	1		1	1	1	2	
First Matched Response	3	1	2	2	3		4	

Key:

LCY = Lower class younger

LCO = Lower class older

MCY = Middle class younger

MCO = Middle class older

Table 6

Time After Instructions Were Completed Until

First Match Was Made*

Pairing

	LCY + LCO	MCY + MCO	LCY + MCY	LCO + MCO
	20"	60"	240"	0" (executed before instructions completed)
	45"	45"	55"	15"
	20"	35"	10"	
	58"			
Mean	36"	47"	98"	8"

* Each number in rows 1-4 represents a different pair.

Key:

LCY = Lower class younger

LCO = Lower class older

MCY = Middle class younger

MCO = Middle class older

Table 7

Time for Task (Ten Trials)*

	Pairing			
	LCY + LCO	MCY + MCO	LCY + MCY	LCO + MCO
	100"	360"	480"	200"
	200"	270"	130"	240"
	390"	350"	310"	
	290"			
Mean	4' 5"	5' 27"	5' 7"	3' 40"

* Each number in rows 1-4 represents a different pair.

Key:

LCY = Lower class younger

LCO = Lower class older

MCY = Middle class younger

MCO = Middle class older

Table 8

Ranking of Pictures in Order of Choice

on Ten Trials in All Sessions

Pictures	Matched	Unmatched	Total
Ball	58	4	62
Telephone	48	13	61
Tree	56	4	60
Airplane	42	12	54
Hat	43	9	52